THE BIBLIOTHERAPEUTIC EFFECT OF BIBLE READING UPON MANIFEST ANXIETY

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CHAPTER I

JUSTIFICATION AND LIMITATIONS

The major purpose of this investigation was to determine the specific effects of reading and reacting to selected sections of the Bible upon various measures of manifest anxiety using a college population with adequate reading ability and high anxiety. A secondary purpose was to analyze the differential effects of this reading upon the students who initially possessed substantial familiarity with the treatment materials as opposed to those who did not. More specifically, the aim was to investigate this effect in two groups of college students equated through random assignment to an experimental or a comparison group. Each of these two groups was subdivided into three subgroups - either a top, a middle, or a bottom third of the local distribution in terms of existing knowledge of the treatment materials.

This experiment probed the hypothesis that the debilitating effects of anxiety could be alleviated through an application of the practice of bibliotherapy. It was expected that extended exposure and reaction to preselected statements from the Bible would reduce the reported incidence of anxiety which is considered by most investigators to lie at the heart of every known psychoneurotic disorder.

Justification

Effects of Reading Experience

Carefully read material is believed to have an effect upon a

person. The concern is how a specific effect is produced from a reading experience to satisfy a particular purpose.

In 1931, Waples and Tyler (pp. 187 & 188) reported that determining the effect of representative types of reading upon distinct groups continued to be a major social concern of reading. Later, Gray (1947, p. 1) was concerned about the surprisingly large number of young people, who had been exposed to stimulating and individualized materials and methods, but had somehow failed to acquire the cognitive and affective essentials for their own personal welfare. Russell (1958, p. 398) concluded, after summarizing over seventy studies on the impact of reading, that not much is known about what reading does to people.

Concept of Bibliotherapy

This instructional concern for "personal welfare" and search for an effect of reading upon an individual has fostered a continuing interest in the bibliotherapeutic concept. Several educators (Riggs, 1971; Russell & Shrodes, 1950; Weingarten, 1964) have compiled and reviewed the voluminous literature in this respect. The consensus is that during bibliotherapy an integration of intellectual perception and emotional drive occurs (Russell & Shrodes, 1950, p. 339). After tracing the history of bibliotherapy from classical times to the present, Weingarten (1964, p. 483) specifically emphasized that "the extent of the practice on the college level is not commensurate with the importance and recognition of the approach."

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Age of Anxiety

The time in which we live is often referred to as the "age of anxiety" (e.g. English & Finch, 1954, p. 139; Frankl, 1965, Preface). Kemp (1964, p. 58) used this same label in specific reference to a college population. Several years of personal experience as a college professor, counselor, and advisor tend to confirm this evaluation of many college students. The academic and interpersonal decisions required of some students appear to drain them of the necessary resources to manage their intrapersonal conflicts. In their attempts to untangle themselves from their problems they may begin to express neurotic needs for affection, restriction, exploitation of others, and prestige (Horney, 1939, 1942, 1945). The reduction of these "needs" often heightens their anxiety which stems from the almost inevitable feelings of isolation and insecurity they incur. This study was designed, therefore, to explore a source of help that might be derived from a positive psychological reaction to reading prescriptions taken from the Bible.

Effects of Bible Reading Experiences

Various authors of books contained in the Bible have stated the effect their writings could have upon an individual, if they are read in a certain manner. Comfort, hope, faith, joy, happiness, and freedom appear to be conditionally offered, if there exists in the reader a willingness to routinize, to meditate upon, to principalize, to personalize, to internalize, to implement, and to harmonize his reading in reference to his living.

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The professional literature coming from the fields of library science, medical therapy, and pastoral counseling refers to bibliotherapeutic techniques which have used biblical prescriptions to affect personalities in various positive ways. An interest in this therapeutic technique, however, has not yet led to any experimental investigation. It was in light of these conventional claims and practices that the present investigation was conducted, i.e. to explore the possibility of a significant relationship between the reading of the Bible and a reduction in manifest anxiety.

It was expected that the findings of this study might illuminate some aspects of a therapeutic technique practiced with varying claims of confidence and success by a few significant professional groups in our culture. It was hoped that future investigators would derive both insight and incentive to refine further practice and research in this area.

In conclusion, this experimental examination of the effects of prescribed reading materials upon a specific personality variable easily found in college students is justified for the following reasons: (a) anxiety so often needlessly incapacitates; (b) the psychologically maimed continue to seek personal guidance; (c) bibliotherapy is a technique recommended by respected professional groups; (d) the Bible is a book that is readily accessible and is frequently used in a therapeutic manner; and (e) experimental evidence in this connection is lacking.

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Limitations

Statement of Problem

The intent of this experimental study was to increase the available knowledge about the general effects of reading upon the personalities of the readers. This effect could be categorized at Gray's (1960) "assimilative level" of reading performance. A checking of "comprehension" and provisions for "reaction," Gray's lower levels of performance, were also made in the present study. Based upon relevant literature, the primary expectation was that reading and reacting to selected portions of the Bible would more significantly reduce manifest anxiety in the experimental than would other reading in the comparison group. The comparison group read and discussed articles of their own choosing from any magazine or newspaper. They presumably read items of interest to them. A secondary expectation was that manifest anxiety would be more significantly reduced in those readers and reactors who initially possessed a high degree of Bible knowledge than in those who indicated a low degree of Bible knowledge.

The specific directional hypotheses were:

1. Between experimental group and comparison group (pretest-posttest hypotheses).
   a. For those students with a high degree of Bible knowledge (HB), the mean reduction difference in the measured anxiety of the experimental group would be significantly

greater than the mean reduction difference in the measured anxiety of the comparison group.

b. For those students with an average degree of Bible knowledge (AB), the mean reduction difference in the measured anxiety of the experimental group would be significantly greater than the mean reduction difference in the measured anxiety of the comparison group.

c. For those students with a low degree of Bible knowledge (LB), the mean reduction difference in the measured anxiety of the experimental group would be significantly greater than the mean reduction difference in the measured anxiety of the comparison group.

2. Between experimental and comparison group (posttest-only hypotheses)

a. For those students in the two HB groups, the mean of the manifest anxiety measures in the experimental group would be significantly less than that of the comparison group.

b. For those students in the two AB groups, the mean of the manifest anxiety measures in the experimental group would be significantly less than that of the comparison group.

c. For those students in the two LB groups, the mean of the manifest anxiety measures in the experimental group would be significantly less than that of the comparison group.

3. Within experimental group and comparison group (pretest-posttest hypotheses)

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a. For those students in the experimental group, the mean reduction difference in the measured anxiety of the HB group would be significantly greater than the mean reduction difference in the measured anxiety in the LB group.

b. For those students in the comparison group the mean reduction difference in the measured anxiety of the HB group would be significantly greater than the mean reduction difference in the measured anxiety in the LB group.

4. Within experimental group and comparison group (posttest-only hypotheses)

a. For those students in the experimental group, the mean of the manifest anxiety measures for the HB group would be significantly less than that of the LB group.

b. For those students in the comparison group, the mean of the manifest anxiety measures for the HB group would be significantly less than that of the LB group.

Definition of Terms

The terminology basic to this study consisted of these phrases: (a) "bibliotherapeutic effect of Bible reading" which was defined as behavioral reaction to prescribed biblical readings considered to be related to a reduction in manifest anxiety; (b) "manifest anxiety" which was operationally defined as that variable which was measured by the specific scales of the anxiety tests used. In some tests these

scales were also referred to as either overt or symptomatic anxiety. The meanings attached to these terms were considered as limitations of the present study.

Further explication of the concept of "bibliotherapy" revealed that Crothers (1916), one of the first to use the term "bibliotherapy," was concerned with the actual effect which any particular book might have. Webster's Dictionary (1961, p. 212) defined it as "guidance in the solution of personal problems through directed reading; the use of selected reading materials as therapeutic adjuvants in medicine and psychiatry." Schubert (1964, p. 29) referred to bibliotherapy as "the use of selective books for their therapeutic effect on children who are mentally or emotionally disturbed." These references present a corrective as opposed to a preventive aspect.

Design of Research

The pretest-posttest control group design was used. Four standardized measures of overt anxiety were administered to obtain multiple observations of the variable in question. Pretest-posttest mean difference scores were computed with two of these measures. Random assignment of the population to treatment groups allowed for posttest mean difference comparisons for two other measures. The *t* ratio was computed on these scores between experimental and control groups and, within these groups, between those with high Bible knowledge as opposed to those with low Bible knowledge.

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Formulation of Populations

For this investigation 1021 students were initially tested. The final population consisted of 173 undergraduate college students enrolled in the fall semester of 1971 at Slippery Rock State College in western Pennsylvania. All of these students had received a corrected score of at least twenty-three on the "speed of comprehension" scale of the Davis Reading Test, Form 1A. The cut-off point, which was equivalent to one standard deviation below the local mean, was intended to eliminate students who might not be able to handle the treatment material for both the experimental and comparison groups. They also had fallen within the top third of the national norms on the "neuroticism" scale of the Eysenck Personality Inventory, Form A, and had received low scores on the "faking good" scale. This combination of scores helped to insure a high level of manifest anxiety apart from a "faking" tendency.

Sixty-six high scorers and fifty-four low scorers on the Standardized Bible Content Test, Form A, were randomly assigned to experimental and comparison groups, while fifty-three average scorers were randomly assigned and trained to act as regular and alternate group moderators in both groups. This leadership procedure was used to reduce leader bias in terms of the treatment. Random assignment allowed for a comparison to be made between these two moderator groups.

Differential mortality was partially controlled by selecting most students from their assigned classes in the Department of Educational Psychology and Guidance wherein this research was either a part of the course requirements or could be elected for extra credit

if the student qualified. All 120 participants plus the fifty three moderators completed both the pretest and posttest batteries.

Selection of Tests

Four objectively scored measures of the dependent variable were used: (a) the Eysenck Personality Inventory, Form A, supplied a pretest and posttest score on "neuroticism", or manifest anxiety; (b) the Eysenck Personality Inventory, Form B, gave only a posttest score on "neuroticism"; (c) the IPAT Anxiety Scale Questionnaire, labeled Self-Analysis Form, gave an "overt anxiety" measure in the posttest sequence; and (d) the Taylor Manifest Anxiety Scale, labeled Biographical Inventory, allowed a fourth observation of anxiety in both the pretest and posttest evaluations.

Two other tests were used in the selection of the population. The Davis Reading Test, Form 1A, was administered to insure an adequate degree of reading comprehension ability. The "speed of comprehension" score was used because it possessed a higher reliability than the "level of comprehension" score. The raw score from the Standardized Bible Content Test, Form A, was used to indicate the degree of prior familiarity with the treatment materials.

In summary, the purpose of this study was to investigate the impact of reading and reacting to selected portions of the Bible upon manifest anxiety in a college population. The major expectation was that this treatment would significantly reduce manifest anxiety as objectively measured by four anxiety scales. A pretest-posttest

control group design was used with the *t* ratio computed between and within groups. Standardized observations were also made to determine previous commitment to the treatment materials and to insure adequate reading ability. An underlying concern of this study was to probe a potential alleviation to the debilitating effects of anxiety.

CHAPTER II

RESEARCH AND LITERATURE

The general purpose of this study was to explore the relationship between reading portions of the Bible and a reduction in manifest anxiety. In this review of the literature, three related areas were considered important. (a) In Application of Bibliotherapeutic Practices emphasis is placed upon some of the materials and techniques that have been developed. The present investigation, represents a combination of some of these suggested clinical procedures. Numerous investigators have contributed practical ideas; however, only a half-dozen experimental studies are specifically related to the present study. (b) Treatment and Interpretation of Manifest Anxiety stresses the pervasive characteristics of symptomatic anxiety, suggestions concerning its etiology, and specific problems of college students related to anxiety. In (c) Assumed Effects of Bible Reading Upon Manifest Anxiety reference is made to the shortage of experimental evidence related to a common quasi-clinical procedure. The literature related to both the general and specific prescribing of biblical materials to effect alleviation of symptomatic anxiety is reviewed along with specific responses to biblical concepts from college students.

Application of Bibliotherapeutic Practices

Contribution from Medical Practice

Controlled experimental studies. Several medical doctors, specif-

ically psychiatrists, have commented favorably on their experiences with bibliotherapy. They have generally used a team approach which included a hospital librarian. Saper (1967) studied the usefulness of bibliotherapy to encourage therapeutic movement during psychotherapy. He used a matched groups technique with six subjects in each of three groups. The subjects were matched in respect to chronological age, intelligence, diagnosis, educational level, and length of hospitalization. Group one selected reading prior to group therapy. Group two got only the group therapy, and group three got a group exercise, a neutral activity, prior to the therapy. Five measuring devices were used at specified intervals throughout a nondirective therapeutic sequence to ascertain therapeutic movement.

No differences were shown on the standardized measures, the Rogers-Dymond Adjustment Scale, the Willoughby Neurotic Fear Scale, and the Rogers Process Scale. He concluded that bibliotherapy can be a valuable adjunct to group psychotherapy based on greater movement in his experimental over his control groups. According to Saper, the experimental group underwent greater involvement, problem solving, and insight as shown by two subjective measures, a therapist judgment scale and a content analysis of the sessions. This study lacked the advantages of initial random assignment to treatment groups compounded by the traditional weaknesses of the matched-groups technique. In addition to these potential weaknesses are the problems of leader bias which is made even more complex by the inherent possibility of instrumentation decay present in most subjective evaluations. This study appeared to lack the necessary controls which would allow the treatment,

rather than these extraneous and confounding variables to explain the effect on the dependent variable, "therapeutic movement."

Methodology and techniques. In the 1930's Ruhberg and W. Menninger were experimenting with bibliotherapy. Ruhberg (1930, pp. 422 & 423) concluded that books could be an "immense help." His approach was more successful with neurotic than with psychotic patients. W. Menninger (1937) discussed his five-year program and was willing to state that it was a valid treatment method. Sadler (1945) had his patients keep a diary of their reactions to their readings, a technique used in the present investigation.

Gottschalk (1948) enumerated the major ways in which selected reading material can advance the therapeutic process; e.g., (a) by relieving tensions resulting from misinformation, (b) bringing about insight into emotional dynamics, (c) helping the person understand his reactions to conflicts and frustration, (d) facilitating communication between patient and therapist by giving them a common body of material to discuss, (e) alleviating feelings of guilt or fear, and (f) encouraging the person to test out more acceptable patterns of behavior.

With specific reference to the role of the hospital library in the recovery of their patients, Ball (1954), Hannigan (1954), and K. Menninger (1961) confirmed some of the ideas in Gottschalk's summary and contributed further insight on methodology. Hannigan (1954) claimed success in a group bibliotherapeutic practice which required adjusting materials to the needs and interests represented. A modification of this group method was used in the present study. Ball (1954) concluded that bibliotherapy was an extremely valuable

addition to the physician's therapeutic repetroire. He likened the librarian to a pharamacist who fills the prescriptions from his shelves for the therapist. K. Menninger (1961, p. 316), in this connection, said that the library contains "many things needed by the patient to inform him, assist him, inspire him, and amuse him."

It would appear, therefore, that bibliotherapy has enjoyed a measure of respect which has caused some in the medical field to examine its potential. Subjective evaluations of results have tended to be favorable, although little objective evidence is available. Hopefully, future investigators might consider more precise scientific controls along with some of the techniques described here. The present investigation used multiple, objective observations of the dependent variable to reduce the effects of instrumentation decay and single, objective measures.

Suggestions from Educators

Controlled investigations. Less than a half-dozen experimental studies have been completed in terms of the bibliotherapeutic concept that are related to the present investigation. The study by Shrodes (1949) stands out as one of the earlier investigations. Her psychological examination of the practice was aimed at discovering the basic affective functions that produce the therapeutic results. She concluded that the necessary psychological processes were identification, insight, and catharsis.

Four investigators have explored her hypotheses in greater depth. Herminghaus (1954) investigated the use of bibliotherapy with a group of eighth grade children. He hypothesized that it was possible,

through children's reading of books suited to their individual needs, to aid in modifying attitudes in desirable directions and in producing desirable personal and social adjustment. There were two parts to the study. The first part involved the construction of a manual and guide for elementary teachers on bibliotherapeutic practice. This manual contained three parts: (a) a discussion of the nature of personality; the role of reading in the formation of personality; and methods of using one's personality; (b) an index of problem situations and behavior deviations keyed to specific titles in the third part; and (c) an annotated bibliography of suitable books with the reading and interest levels indicated for each.

The second part of this study was an attempt to determine the results of the use of this guide with eighth graders over a period of eight months. Using a pretest-posttest control group design, he equated the groups on the basis of socioeconomic status, mental age, chronological age, reading ability, and teacher qualities. The control group received their normal program of reading and guidance; the experimental group received a program that combined his manual with integrated reading guidance. Based on the California Test of Personality, the Rosenzweig Picture-Frustration Study, and the Thematic Apperception Test, the experimental group showed better personal and social adjustment and greatly reduced incidence of aggressive feelings, whereas the control group went the other direction on these factors. The specific prescription of materials for behavioral deviations sounds like a promising technique.

In 1962, Bovyer investigated the effect upon upper elementary students of single oral readings, done by teachers, of unfamiliar

stories depicting sportsmanship. He discovered that single oral readings were not enough to make a difference in this variable. Suggested alternatives to this technique were more teacher guidance and, possibly, discussion of the stories. Another recommendation was to find stories that the students could read for themselves. Techniques for observing the dependent variable were not discussed.

Shirley (1966) tried to ascertain changes in the concepts, attitudes, and behavior of secondary-level students as a result of their reading. Using a modified critical incident technique as a basis for collecting data, she correlated the materials reported by the students as having influenced them with chronological age, intelligence, vocabulary, grade, and comprehension. A chi-square was used to test sex and grade level differences in number of influences reported from voluntary or assigned reading and fiction or non-fiction materials. Out of her observations and qualitative analyses of reported influences on four hundred adolescents in this study emerged seven dimensions of self-involvement: (a) the indifferent, (b) the observer, (c) the partial participator, (d) the intense participator, (e) the self-image synthesizer, (f) the construct synthesizer, and (g) the decision maker.

Shirley concluded that the participants had gained insight into the second major purpose of reading instruction, i.e. personal development. In this study they had become more sensitive to people and had developed a more positive self-image. She also concluded that these students were more influenced by voluntarily selected reading materials than by rigidly assigned reading. The degree of influence was more highly related to intelligence and reading

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proficiency than to the type of literature selected, i.e. fiction or non-fiction.

Lewis (1968) investigated the impact of selected literature upon sixth graders in terms of the following values: aggressiveness, selfishness, and nurturance. With the basic assumption that literature would influence these values, she hypothesized that aggressiveness and selfishness would be decreased and that nurturance would be increased as a result of three experimental treatments. A semi-projective Test of Values in story-form constructed by the investigator noted changes in values expressed either as feelings or as behavior. A pretest-posttest multiple control group design was used with the Test of Values as the major observation.

There were two hundred sixteen pupils used in the study. Eleven short stories portraying the desirability of nurturance and the undesirability of aggressiveness and selfishness were read by two groups of fifty-four subjects each over a period of six weeks. After the reading, one group discussed the stories and the values. A third group discussed the values without reading any stories. A fourth group neither heard, nor read about, nor discussed these values. The results are as follows: (a) In the "reading-no discussion group" there was an increase in both actual aggressiveness and in projected aggressive feelings with a decrease in selfishness and both actual nurturance and projected nurturance feelings. (b) In the "no reading-discussion of values group" there were no significant changes except for a slight increase in aggressiveness. (c) In the "reading-discussion group" there were no changes on any of the variables. The investigator felt that free discussions after the reading facilitated

internalization and catharsis. She concluded that reading does have an impact on one's values if "good" readings are selected and open-ended discussions are allowed.

It appears, therefore, based upon the Shirley and Lewis studies, that greater change seems to be positively related to increased involvement of the participants in terms of self-selection of materials, group discussion after the readings, and more facile reading ability.

Methodology and techniques. Several investigators from the field of education have informally tried bibliotherapeutic methods. From their experiences they have recommended improvements in technique. As early as 1942, Gagnon had stressed the importance of someone keeping a record of the readings done. As was noted in an earlier section, Sadler (1945) had his patients keep a diary of their readings and their reactions to the ideas expressed. In the present investigation the students kept a weekly record of their readings and reactions on a card especially designed for this purpose.

Cole (1942) located "problem students" and used their expressed interests as an opening to effect a higher level of social maturity and more acceptable behavior. In the present investigation the expressed interest technique was used in the comparison group as a control for the modified self-selection of readings in the experimental group. In 1966 Shirley, mentioned earlier, concluded that voluntarily selected materials appeared to be more productive of the desired effects.

Allen (1946) and McConnell (1962) were both concerned with modification of behavior and attitudes. They concluded that a

bibliotherapeutic approach could be effective in this respect. Allen (1946) stressed the team concept, allowing for the best use of personal skill specialization. McConnell (1962) explored the assumed values of the currently popular biographical literature in terms of its potentially powerful influence upon the attitudes and behavior of its readers, specifically as it relates to their need to achieve in spite of problems. He recommended that the adolescent-reader might consider identifying, listing, and discussing some of the characteristics of those biographies presented. This practice of increased supplementary action related to their reading appeared to aid in reinforcement, clarification of ideas, and intensification of interest and pleasure. In this connection, the present investigation involved written identification of the main idea, or "gist" of each reading selected, followed by a discussion of this idea before or with a group. This intensification of self-involvement appeared to move most participants at least to the middle of the range of six dimensions discussed earlier by Shirley (1966).

Keneally (1949) and Lazarsfeld (1949) contributed ideas on an evaluation of the reactions of subjects to their reading experience. In the present investigation, the co-moderators of each therapeutic unit produced a subjective summary of the oral and other behavioral symptoms exhibited during their session. Lazarsfeld (1949) used an objective test to study the reactions of subjects to what was in the text and "between the lines" of prescribed books. Keneally (1949) used a questioning technique in conjunction with individual therapeutic guidance. The evaluation was based upon the subject's ability

to apply his readings to his own personal problems. In the present investigation the results of Keneally's technique could be compared to the information secured from the objective measurements of the dependent variable.

In summary, the following conclusions appear to have some bases: (a) Many professional disciplines, subsuming the librarian, the educator, and the psychiatrist, have been involved and continue to express interest in and concern with bibliotherapy. (b) The few who have actually researched the concept have suggested that various personality factors, which are of a peripheral and behavioral nature, have been modified by the practice. (c) This effect has appeared to be more insured if the following conditions obtain: the symptomatology is moderate; the reading material is carefully selected but not too rigidly assigned; a record is kept of both the reading done and reaction to the reading; and maximum involvement of the reader is stressed.

Treatment and Interpretation of Manifest Anxiety

Symptomatology and Treatment

English and Finch (1954, pp. 139 & 140) elaborated on the symptomatology of anxiety in these terms:

> Overt anxiety is an extremely common symptom in our population, suffered in at least a mild degree at various times by almost everyone. We classify an individual as having an anxiety reaction when anxiety becomes more or less chronic and reaches a sufficient intensity to become at least partially incapacitating ....Anxiety is a basic and fundamental symptom of every type of psychoneuroses....Psychologically there occurs a feeling of impending disaster, which is uncomfortable in nature.

The four points they suggested for the treatment of anxiety which are relevant to the present study and are widely accepted therapeutic procedures are paraphrased here: (a) keep communication clear, concise, and simple in explanations and discussions to avoid misinterpretation and misunderstanding; (b) provide simple reassurance that one's condition is not hopeless and not uncommon - avoid a "lecture"; (c) allow the patient to express himself freely, to relate his life at whatever stage he recalls, since this increases necessary knowledge and self-understanding; and (d) expect to exercise considerable patience, time, and effort. In terms of a prognosis, they ventured the possibility of an adequate response if the condition is not too severe; if it is treated rapidly and efficiently; if the ego is strengthened; and if the situation has not been too long-standing. In the present investigation the subjects were encouraged to express their reactions to their readings, while the group leaders elicited rather than contributed expressions of feelings.

Etiology and Interpretation

The works of Horney, May, and Sullivan stand out as some of the more significant theories which have explained manifest anxiety as interpreted in the present investigation. In 1937, Horney (pp. 41-78) elaborated on the meaning of anxiety in contrast to fear and suggested that anxiety is a function of repressed hostile impulses. She (1939, Ch. 12) interpreted anxiety in the context of psychoanalytic theory and (1942, p. 116) discussed the anxiety aroused as

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the person responds "to a dawning vision that he must eventually change something in his foundations if he wants to become free."

In addition, she developed a list of ten "neurotic" needs any of which could be acquired as a consequence of trying to untangle the problems of disturbed human relationships, i.e. the neurotic need for: (a) affection and approval; (b) a partner who will take over one's life; (c) restricting one's life within narrow borders; (d) power; (e) exploiting others; (f) prestige; (g) personal admiration; (h) personal achievement; (i) self-sufficiency and independence; and (j) perfection and unassailability. All of these "needs" she labeled as unrealistic, self-defeating, and the source from which inner conflicts and anxiety develop.

In 1945, she (p. 41) explained her primary concept of basic anxiety as the feeling a person has of "being isolated and helpless in a potentially hostile world," an insecurity stemming from various environmental factors, including lack of real guidance, isolation from other people, unkept promises, etc. She also discussed anxiety in reference to neurotic conflicts, attempts at their resolution, and the consequence of not resolving these conflicts.

May (1950) reviewed several theories regarding the modern interpretations and clinical analyses of anxiety. He offered a theory of anxiety which accounted for the conflicts between a person's need to become both an independent, autonomous person and at the same time a contributing and accepted member of his social group. Branch (1968, p. 84) appeared to have confirmed this finding with college students.

Sullivan (1953, p. 113) developed an explanation of the functions

of anxiety in reference to interpersonal relationships and claimed that "anxiety, as a phenomenon of relatively adult life, can often be explained plausibly as anticipated unfavorable appraisal of one's current activity by someone whose opinion is significant." The present grading system in operation on most college campuses could, therefore, contribute to a student's anxiety level.

Anxiety and College Students

Kemp (1964, p. 58 & 78) referred to our "age of anxiety" and suggested that much on a college campus tends to accentuate anxiety. Among factors discussed were the pressure of classes, the fear of failure, the desire for status and recognition, the multiplicity of activities, and the limited amount of time.

The literature contains many references indirectly related to the anxiety experienced by college students. For example, Pope (1943) had 2000 students write essays on the subject of their personal problems. They mentioned about 7000 problems mostly in terms of their difficulties in dealing with the external environment. Similarly, Heath and Gregory (1946, p. 358) found that 90% of the "normal students" at the college level raised problems they wished to discuss; 72% were glad to talk about them; 88% were seen as needing help by a clinical staff; and 17% presented urgent needs. They concluded that most college students had received relatively poor preparation for the adjustments of college life.

Branch (1968, Ch. 11), in discussing the emotional problems of students, suggested that 10% of college students have emotional

problems that seriously interfere with their studies. He submitted that the college student's "new 'freedom' can be a source of anxiety and may initiate difficulties which will try him throughout his college years....Instead of feeling free, he is likely to feel alone" when he is on his own. The presenting symptoms of this "freedom-anxiety" are apathy, isolation, aggression, exam anxiety, or psychiatric disorders. He also suggested (pp. 137-143) the use of Taylor's and Cattell's anxiety scales in the measuring of this anxiety. These are the Manifest Anxiety Scale and the Self-Analysis Form used in the present investigation.

In summary: (a) Manifest, overt, anxiety is an almost ubiquitous "disease" of our time that grips, debilitates, and incapacitates our population. (b) An individual is predisposed to anxiety by a repression of hostilities, while insecurity, isolation, defective self-concept, conflict between autonomy and groupness, and campus routine and "freedom" tend to perpetuate it. (c) Anxiety is apparent in the self-defeating and unrealistic needs for affection and admiration, restriction and control, exploitation and power, and achievement and perfection. (d) It is also related to apathy and aggression, and is precipitated by a felt need to change oneself, a significant disruption of interpersonal relationships, and a faulty anticipation of future events and heteronomous appraisals. (e) With the precaution that the experience of anxiety is often heightened if attempts at resolution are unsuccessful, the treatment for it often consists of clear communication, patient efforts, positive reassurance, and nurturance of correct foresight from the therapist with the encouragement of free expression from the patient.

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Assumed Effects of Bible Reading Upon Manifest Anxiety

Biblical Bibliotherapy and Anxiety

Specific scriptural treatment. Some "therapists" have delineated specific verses and sections which they have used in their treatment of anxiety. Oates (1953, Ch. 5) referred to the Bible as a book of comfort and reminded that comfort is the second great purpose of the Bible prescribed by the Apostle Paul in Romans 15:4. He listed specific verses for the pastoral care of types of people.

Goulooze (1950, pp. 9 & 77) summarized the results of over one thousand questionnaires returned to him from suffering, "sorrowful or sick," people. He suggested that the Bible would grow upon the reader "as an astonishing textbook, of mind, soul, and even body therapy" and as a "hitherto unrealized source of penetrating insights into human nature." Among other normative data gathered, he listed the sections of the Bible stated to be of most help by the "suffering people" in his study. Half were from the poetic portion of the Bible.

Other therapists have attested to their successful experiences with specific scriptures, especially the Psalms. For example, Allen (1953) claimed success in dealing with the problems and anxieties of people by prescribing for repeated, thoughtful reading a selection from one of the four best-known passages of the Bible, i.e. the Twenty-Third Psalm, the Ten Commandments, the Lord's Prayer, and the Beatitudes. Narramore (1960, pp. 258-273) supported the use of these and other scriptures in his detailed account of the basic concepts

and techniques of counseling and suggested numerous selected chapters which were used in the present investigation.

In summary, suggested prescriptions and personal testimony are available but controlled research has not been located. The various references to specific sections, for example, tend to confirm the appeal and effectiveness of their concepts.

Non-specific biblical treatment. From the literature dealing with pastoral psychology including the medical, clinical, psychiatric, and psychological aspects of religion, or Christianity, there are many references to the use of the Bible in general to diminish anxiety. A few are paraphrased here.

Wise (1956, pp. 42-44), from the viewpoint of a psychiatrist, has treated the issue of fear, anxiety, and faith and has suggested that "when we get the feeling that no people ever knew anxiety as we know it today, we may turn to the Bible for a correction of our perspective....The Bible presents the problem of anxiety just as vividly and intensely as we know it today." He cautioned against the use of "repressive self-suggestion," the mere repetition of biblical passages apart from attempts at meaningful discussion and comprehension. This emphasis upon "meaningfulness" is a conspicuous, recurring theme throughout the literature on the therapeutic use of the Bible. The present investigation, therefore, emphasized continuous personal reactions to the meanings derived.

Fitch (1911, Ch. 3) referred to the Bible as "the greatest book in the world....a comfort in sorrow and a stimulus to good life." He also discussed the comfort to be found in other "old books."

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King (1922) presented an early account of how the use of the scriptures, both Old and New Testaments, helped one to overcome a lifetime of numerous fears and anxieties, while Mott (1926, Ch. 14) spoke of the rewarding effects of Bible reading upon individuals including philosophers, authors, poets, politicians, statemen, and architects.

Responses of College Students to Biblical Concepts

Specific responses. There are some references to the specific use and effect of the Scriptures on college students, some of whom are being affected by the Bible in ways they are willing to admit. The presence of their interest in the Bible with its use in the reduction of their doubts, personal problems, and worries suggested some support for attempting the present investigation.

Kemp (1964, p. 65) discussed the need for understanding the academic, emotional, and spiritual problems of students. He quoted biblical examples from Habakkuk, Psalms, and the Apostle Paul to illustrate how many college students can receive assistance in working from doubt to faith.

More specifically, Howard (1971, pp. 78-86) recorded the exact comments of several college students concerning the effect of the Bible on them, e.g. (p. 78) "Psalm 33:17 blew my mind"; (p. 82) "We just want to thank you Father, for letting us be worthy stewards of your Word"; and (p. 84) "I just said the words (Romans 10:9) one night and knew right away they were true." She also mentioned (pp. 80 & 81) that their talk was "heavily laced with references to

Ephesians and Leviticus....They flip through their dog-eared Bibles like graduate seminary students, underlining with yellow Magic Markers passages that hadn't struck them before."

Carrington (1957, p. 138) listed specific ways for equipping parents to understand and help their college-age children. With specific reference to anxiety he said (p. 214):

> These three great qualities - knowledge, faith, and love - are the three great weapons available to us in achieving and helping others to achieve the control of anxiety....We could summarize it by suggesting that knowledge illuminates anxiety (and thus reduces 'fear of the unknown'), faith neutralizes it, and love casts it out (I John 4:18).

Non-specific responses. Van Dyke & Pierce-Jones (1963) have reviewed sixty genetic and retrospective studies related generally to the psychology of religion and religious values, development, denominational affiliation (religiosity), and group comparisons during middle and late adolescence. Most of the research dealt with the relationships between ethical attitudes and the Allport-Vernon Study of Values, the Thurstone-Chave Scales, and the Minnesota Multiphasic Personality Inventory. None of the research was experimental, and none of it mentioned Bible knowledge. However, it did indicate the interest that has already been expressed in the religious attitudes of students.

Johnson (1948, pp. 135-138), in his discussion of guilt in adolescents, recommended four favors religion could perform for them, i.e.: (a) accept and approve them on growing terms; (b) provide group activity and therapy; (c) forgive their mistakes and failures; and (d) allow them to creatively release their emotional responses.

The following studies, however, appear to suggest that knowledge

of dogma, ceremony, history, religion and other ideas somewhat related to the Bible make little difference but are related to, if anything, a negative effect. For example, Ross (1950, p. 158) studied 2000 young people and found that 75% stated an adherence to orthodox ideas about God, Jesus, and the Bible, but only about 15% possessed a corresponding sense of security. Franzblau (1934) found no close relationship between knowledge of religious history or ceremonies and growth of character or personality.

In summary, the following statements appear to be warranted: (a) Many investigators claim that reading the Bible will provide comfort, security, and happiness, if its anxious and "suffering" readers and listeners receive its message with mental readiness, meditation, and self-application. (b) From the professional literature of the fields of pastoral and clinical psychology the references are numerous to a reading of the Bible wherein both the cause and the cure to this "mental pain" of anxiety are presented. (c) Pursuit of this application of the Word as a book of comfort and healing in both a supportive and curative manner is consistent with the basic concept of the practice of bibliotherapy and the second purpose of the Bible stated by the Apostle Paul. (d) Several pastoral and clinical psychologists, psychiatrists, parents of college students, "suffering" people, and college students themselves have empirically "proven" the Bible, especially the poetic portions, to be personally helpful. (e) On several occasions the Bible has provided a source of help that cannot be duplicated elsewhere. (f) Intellectual explanations and rote repetition apart from comprehension and application of biblical meanings to oneself with confidence in its

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authority appear not to be helpful. (g) Possession of knowledgeable ideas related to the Bible, such as religious dogma, ceremony, history, culture, and philosophy, appear not to be of help.

Summary

In the above review of the research and literature is found the basis for the following general conclusions: (a) A few researchers from various professional fields have mentioned that a select number of personality factors of a peripheral nature have been modified in a positive direction through the use of bibliotherapy. This effect of therapeutic reading is more apt to occur if supplemented with discussion, rereading, and written reactions to the reading. (b) In the professional literature of the fields of pastoral and clinical psychology, as well as in a variety of personal testimony, are numerous references to the relief from anxiety through the use of the Bible, if it is read with willingness, meditation, and personal application. (c) The usual relationship between therapist and patient centered upon selections from the Bible dealing with anxiety reduction is expected to generally produce a positive response.

CHAPTER III

PROCEDURES AND MATERIALS

The general purpose of this study was to investigate the effect of reading and discussing selected sections of the Bible upon various objective measures of manifest anxiety using a college population. The major set of hypotheses stated that reading and discussing portions of the Bible would significantly reduce overt anxiety as measured by four, standardized anxiety scales. A second set of hypotheses stated that manifest, or symptomatic, anxiety would be more significantly reduced in those students who initially possessed a high degree of factual Bible knowledge than in those who originally indicated a low degree of factual Bible knowledge.

A pretest-posttest control group design was used. Pretest to posttest gain scores were computed for all groups. The *t* was calculated on the gain-score differences between experimental and comparison groups for the first set of hypotheses and within these groups between the high Bible group and the low Bible group for the second set of hypotheses.

Standardized observations were made to determine previous commitment to the treatment materials for the experimental and comparison groups and to help insure an adequate reading comprehension ability.

Procedures

Pretesting: Sequential Selection of Population

Initial screening stage. The Eysenck Personality Inventory, Form A, was given to 1021 college students during their regularly scheduled classes in the four departments of Psychology, Elementary Education, Educational Psychology and Guidance, and Health and Physical Education. This initial screening, which involved seventeen different professors in these four departments and forty different class sections, was done from September 29 to October 1, 1971. These three days were at the beginning of the fall semester at Slippery Rock State College in western Pennsylvania.

Immediately prior to the administration of the Eysenck Personality Inventory, all 1021 students had been told that the investigator was looking for some college students who would qualify for a unique and exciting research study which would have to do with the behavioral aspects of their personalities. It was also indicated that only about one out of seven would eventually qualify, and the investigator was hoping that this research would make a significant contribution to the field of education. The people who did qualify would be asked to donate willingly approximately one hour per week of their time for the next few weeks prior to Christmas vacation. It was stressed that participation was on a volunteer basis and all personal information collected would be held in the strictest professional confidence. Social security numbers would be used to maintain anonymity.

Differential experimental mortality was largely controlled by selecting the population from their assigned classes where, in

several instances, the present investigation was either a part of their announced course requirements or extra credit was allowed for participation if the student qualified.

Of these 1021 students initially tested by the Eysenck Personality Inventory, Form A, 540 scored at or above the 64th to 70th percentiles according to national norms on the "neuroticism - stability scale." These two percentiles are equivalent to the raw scores of 11 and 12, respectively. These 540 students had also received a raw score of 4 or less on the "lie scale," the "faking good scale." The majority of these students were sophomores and juniors with a few freshmen and seniors.

Secondary screening stage. These 540 students were invited to participate in the next phase of selection which was held on the four evenings between October 4 and 7, 1971. The individual professors passed around in their classes a list of the social security numbers of those who qualified.

The Davis Reading Test, Form 1A, and the Standardized Bible Content Test, Form A, were administered in that order to 340 who responded out of the 540 students invited. At this time all students were told that it was necessary to check their reading ability and Bible knowledge as part of the introduction to the two respective tests. At the conclusion of this two-hour testing session the students were asked to not discuss these tests with their classmates for the remainder of the week.

The local mean for the Davis Reading Test was 35.1 with a standard deviation of 12.7. Fifty students scored below a raw score of 23, or below one standard deviation, and were eliminated

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from the research. This left 290 students. The "speed of comprehension scale" was used because of its higher published reliabilities than the "level of comprehension scale." The former scale is twice as long as the latter scale, which probably accounts for this higher reliability.

On the Standardized Bible Content Test the local mean was 36.3, median 36.0, and standard deviation of 10.7. Those with raw scores of 40 or more, 103 students, were considered as having high Bible knowledge for the purposes of the present investigation. Those with raw scores of 33 or less, 101 students, were considered as having low Bible knowledge. Those students with scores between 34 and 39, 86 students, were considered as having average Bible knowledge.

Random assignment to groups. Using a table of random numbers these three groups (high, average, and low Bible knowledge) were assigned to an experimental or a comparison group. The "high Bible" group of 103 students was, therefore, divided - 53 into the experimental group and 50 into the comparison group. The "low Bible" group of 101 students was divided - 51 into the experimental and 50 into the comparison group.

Designation of co-leaders. The "average Bible" group of 86 was divided into two groups and designated as moderator-leaders of the discussion sessions. Those 56 students with central scores of 35 to 38 on the Bible test were called "regular leaders." These 56 "leaders" were randomly assigned - 26 for the experimental group and 30 for the comparison group.

The remaining 30 of the 86 average scorers had low or high

average scores of 34 or 39 on the Bible test. These students were called "substitute leaders." These substitutes were randomly assigned - 12 to experimental and 9 to comparison. Nine of these students dropped out of the project prior to assignment.

This leadership technique was used to reduce the introduction of bias in terms of initial familiarity or prior commitment to the treatment materials. The combined experimental and comparison group leaders, both regular and alternate, were given one initial training session of about fifteen minutes on the general management of a discussion session and the use of the reaction record cards which are described later. They were told that they had been selected to be the leaders because of their unique pattern of scores. This specific "pattern" was not revealed to them until after the investigation was terminated.

Orientation Session. At the introductory meeting of the discussion groups on October 11, 12, 13, & 14, 1971, orientation was provided. The usage of the reaction cards was explained and reading assignments were distributed. The Taylor Manifest Anxiety Scale was administered the next week to both the participants and the leaders in the experimental and comparison groups. (See Appendix A.) A total of 202 students took this test which was referred to as the "Biographical Inventory."

Experimental Treatment: Reading Procedures

Reaction Emphasis. In the present study the emphasis was more upon personalized reaction than upon discussion. The students were

expected to react to their reading, not to their discussion leader or to the research. Specially designed cards, identical for experimental or comparison groups, were called "reaction cards." These cards are discussed more thoroughly under "Description of Student Reaction Cards." Briefly, these cards served a multitude of purposes. They involved the reader in some evaluation of his reading. They were a constant reminder of the emphasis upon reaction. It was felt that reaction preceded assimilation as discussed by Gray (1960). Assimilation was considered a necessary prerequisite, or concomitant, to the positive behavioral modification expected in bibliotherapy.

Reaction-discussion sessions. After recording a personalized reaction to his reading, the student attended a weekly discussion group to share at least one of these reactions with others within his group, either experimental or comparison. High Bible and low Bible people were not differentiated in these discussion sessions. The co-moderators were trained to assure that every participant was allowed this opportunity. In fact, very simple techniques were used by these moderators to elicit as many reactions as possible from the subjects within a twenty-five minute time period.

These reactions were in terms of the designated readings. The students were encouraged to react to only those materials they had personally read. They could also briefly react to someone else's reaction, if they had formerly read the same selection. In this sense, they were discouraged from reacting unless they had personally read the specific selection.

The group discussions, therefore, were basically a collection of

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these reactions. Verbal interchanges over theological, political, or speculative interpretations were not reinforced, whereas visceral accounts of how one had been individually affected by what he had read were rewarded.

Group discussions schedule. Based upon three factors: (a) the free periods stated by the subjects including the moderators; (b) the free periods of the investigator; and (c) the availability of rooms to hold discussions, twelve different fifty-minute periods per week were chosen as group discussion periods. This number dropped to eleven periods when one time in the late afternoon was not selected by the subjects. There were three periods per day for the first four days of the school week. No meetings were held on Fridays. These periods were divided in half - two 25 minute periods. To maintain some predictable structure, the experimental group met for the first half of the period and the comparison group for the last half of the period. The first discussion was on October 18 and the last was on December 9, 1971. (See Appendix A for the complete schedule.)

Moderator responsibilities. The moderators were also expected to read and react on their cards, but they were discouraged from reacting to their groups. Their responsibility involved eliciting reactions not in giving a reaction during the group meetings. They were also to listen to the oral reactions given and briefly summarize the meeting on a separate card. This technique helped insure a favorable level of involvement for the moderators. To make sure that some visible exposure was maintained for all participants, the co-moderators alternated in reading some portion of the assigned material to the

participants at each weekly session. A few reactions were solicited to this oral reading performed by the moderator. In this way these discussion groups were able to operate apart from any direct contact with the investigator. This procedure was designed to reduce the extraneous bias of the investigator and allowed time to meet with co-leaders over ongoing procedural and clerical matters as well as periodically checking the reactions of the leaders to their own readings.

The co-moderators were asked to select a specific time schedule when they would be responsible for a group session. The participants, however, were encouraged to come at any of the twelve times posted as a further control over the influence of any one particular co-leader. This procedure allowed for a reduction of the influence of the group in favor of more influence from the readings which was the intent of the investigation.

Feedback to Participants. Questions from the participants, both the leaders and the discussants, concerning the purpose of the research were handled in a non-committal fashion with the promise of full disclosure to those who finished the complete project.

This promise was kept. A dozen interpretation sessions were held at the termination of the research in January of 1972. At this time, the students were asked to describe in writing what they thought the project was about. No student could supply any more information than had already been given by the investigator. Many who had read the Bible did not even think that the Bible was a significant factor in the investigation. The research was referred to only as the "Stone Project."

Posttesting: Statistical Analysis of Data

Research design. A pretest-posttest comparison group design was used. Both groups were randomly assigned, administered identical tests, read from assigned materials, kept a record of their reactions, discussed their readings at eight weekly meetings moderated by randomly assigned leaders with identical leadership training and instructions. The independent variable was their specific readings and the dependent variable was manifest anxiety. Both variables are discussed later.

Directional hypotheses. Four basic groups of directional hypotheses were formulated dealing with comparisons between (a) the experimental group and the comparison group and (b) the high Bible groups and the low Bible groups.

1. A pretest-posttest set of three directional hypotheses stated that the mean reduction difference in the measured anxiety of the experimental group would be significantly greater than that of the comparison group for those students with three levels of Bible knowledge, i.e. prior familiarity with the treatment materials: (a) high Bible knowledge (HB), (b) average Bible knowledge (AB), and (c) low Bible knowledge (LB).
2. A posttest-only set of three directional hypotheses stated that the mean of the manifest anxiety measures in the experimental group would be significantly less than that of the comparison group for those students with three levels of Bible knowledge: (a) HB, (b) AB, and (c) LB.

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3. A pretest-posttest pair of directional hypotheses stated that the mean reduction difference in the measured anxiety of the HB group would be significantly greater than that of the LB group within both (a) the experimental and (b) the comparison group.
4. A posttest-only pair of directional hypotheses stated that the mean of the manifest anxiety measures in the HB group would be significantly less than that of the LB group within both (a) the experimental and (b) the comparison group.

Statistical treatment. The means and standard deviations were calculated by a computer program. To obtain the *t* ratios, the differences between the gain score means were divided by the standard error of the difference. Mean difference scores were used if only a posttest had been given. "Gain scores" referred to a reduction in anxiety.

The directional hypotheses were accepted if the difference between the means, or gain score means, was significant at the five percent point of confidence. The probabilities associated with a one-tail test were used, and all points of confidence were reported.

Measurements used. Four objective measurements of the dependent variable, manifest anxiety, were taken. Two of these tests were used in both the pretest and posttest battery. These were the Taylor Manifest Anxiety Scale (TMAS) and the Eysenck Personality Inventory, Form A (EPI-A). Two tests were used only in the posttest battery. These were the Self-Analysis Form (SAF) and the Eysenck Personality Inventory, Form B (EPI-B).

To reduce the interaction effects of multiple observations, three of these tests given in the posttest battery were administered in three different sequences. The EPI-A was given at the end of each of these three sequences. Using the initials for the other three tests, the three sequences were: (a) EPI-B, TMAS, SAF; (b) TMAS, SAF, EPI-B; and (c) SAF, EPI-B, TMAS. One-third of the subjects in both the experimental and comparison groups took the tests according to each of these three sequences. The experimental and comparison groups, 151 students, were tested at the same times in combined groups during the third week of December, 1971. In the initial week of January, 1972, twenty-two make-up tests were administered.

The Davis Reading Test, Form 1A, and the Standardized Bible Content Test, Form A, used for initial screening purposes, were not repeated in the posttest group of tests. All 173 subjects who took both the pretests and posttests were considered in the statistical comparisons.

Materials

Description of Tests

Six standardized, objective measurements were used. Two of these tests were used exclusively for initial screening and assignment of population to treatment groups. Four tests were measures of the dependent variable variously referred to as manifest, overt, or symptomatic anxiety.

Initial screening tests. The Davis Reading Test, Form 1A (Davis & Davis, 1962), was administered only as an initial screening device

to locate and eliminate subjects with severe handicaps in reading. This test is available in four equivalent forms in each of two series intended for high school or college use. Series I, intended for college use, provided two scores: (a) "level of comprehension," or depth of understanding, and (b) "speed or comprehension," or rapidity and accuracy of understanding. It is an eighty-item objective, group test with a forty-minute time limit. Both scores are corrected by subtracting 25% of the "wrongs" from the "rights." The "level of comprehension" scale has only forty items which is the first half of the "speed of comprehension" scale. For the 340 students who took this test, the mean was 35.1 with a standard deviation of 12.7. A score of 32 is equivalent to the 50th percentile on the national norms for college freshmen, the highest level of norms reported for this test. Although this test does not provide separate scores in these following areas, it does tap such reading skills as: (a) locating precise information, (b) deciphering the central idea, (c) drawing inferences (d) recognizing literary devices, and (e) following the structure of a passage.

The Standardized Bible Content Test, Form A (1961), is one of a series of four forms of equal difficulty on the objective contents of the Bible. Each form contains 150, five-part, multiple-choice items which may be answered in 45 minutes on the test booklet or on a separate answer sheet. Only the raw scores are computed. National freshmen percentiles for colleges similar to Slippery Rock were reported as 25th, 50th, and 75th for the respective raw scores of 40, 55, and 75. The local raw scores were 30, 35, and 42 for the 25th,

50th, and 75th percentiles. For these 340 "highly anxious" students who took this test the mean was 36.3, median 36.0, and standard deviation 10.7. These four forms of this test were constructed by the Committee of Testing, chaired by R.D. Congdon and appointed in 1954 by the Accrediting Association of Bible Colleges at Wheaton, Illinois. They were recommended for: (a) administrative counseling of incoming freshmen, (b) class sectioning, (c) remedial diagnosis of specific weaknesses, (d) checks on individual progress, (e) interscholastic comparisons, and (f) experimental research possibilities. The manual lists over 120 Bible institutes, colleges, and theological seminaries where the test has been used. The freshmen mean for these institutions is approximately 65.0.

Dependent variable measures. The Eysenck Personality Inventory, Form A & B (Eysenck & Eysenck, 1963) measure two dimensions of personality: (a) extroversion-introversion (E) and (b) neuroticism-stability (N). Each of these dimensions in each form is measured by means of 24 questions to which the subject answers either with a "yes" or a "no." Raw scores were used. Extroversion, as opposed to introversion, refers to the outgoing, uninhibited, impulsive, and sociable inclinations of a person. Neuroticism refers to the general emotional overresponsiveness, and liability to neurotic breakdown under stress. A nine-item "lie scale" in each form is considered to be useful in detecting individuals who are "faking good." The "L" score of 4, recommended as a cutting point at which the inventory answers cease to be acceptable, was used. American college means for Form A were:

E-13.1, N-10.9, L-3.8; for Form B: E-15.2, N-11.4, L-1.1. For the 173 students who completed the present investigation the posttest means for Form A were: E-13.6, N-13.3, L-1.9; for Form B: E-14.5, N-15.8, L-1.0. The uses prescribed for this test are for (a) industrial applications, (b) educational guidance and counseling, (c) clinical diagnosis, and (d) experimental applications.

The IPAT Anxiety Scale Questionnaire, entitled the Self-Analysis Form on the scale seen by the subjects, gives three inclusive scores: (a) cryptic anxiety, (b) overt anxiety, and (c) total anxiety, plus five component scores: (d) defective integration or lack of self sentiment, (e) ego weakness or lack of ego strength, (f) suspiciousness or paranoid insecurity, (g) guilt proneness, and (h) frustrative tension or id pressure. According to the manual (Cattell & Scheier, 1963) it is a brief, forty-item, "non-stressful," "clinically valid" questionnaire for measuring anxiety. The sub-components scales have a variable number of items for each scale ranging from four to twelve. The national college mean of 29.0 for "total anxiety" compares with the local mean for the posttest of 38.8. The higher the score, the more anxiety.

The Taylor Manifest Anxiety Scale (Taylor, 1953), innoccuously entitled the Biographical Inventory on the scale seen by the students, gives three measures: (a) anxiety, (b) personal adequacy, and (c) "faking good." High scores on the N scale of 50 items indicated more anxiety. The national mean was reported at 14.6 compared to a local posttest mean of 23.3 for the "anxious" population. High scores on the K scale of 30 items indicate a denial of personal inadequacies

with a low score suggesting an urge to confess weaknesses. High scores on the L scale of 15 items are indicative of an unwillingness to admit aggressive feelings, bad thoughts, temptations, and lack of control. Most of the items for this test are borrowed from the Minnesota Multiphasic Personality Inventory.

All four of these measurements of anxiety are based on the assumption that the intensity of this internal emotionality can be detected by paper and pencil tests consisting of items describing what have been called the overt, or manifest, symptoms of this state.

Description of Treatment Materials

For experimental group. The materials prescribed for the experimental group to read and discuss were selected from portions of the Bible suggested largely by the New Catholic Edition of the Holy Bible (1954, pp. 351-359), Narramore (1960, pp. 258-270), and Joy (1965). Those specific verses and chapters listed or recommended that dealt with the overcoming of apprehension, worry, and anxiety were selected. Other sections of the Bible were used that implied the realization of calmness, peace, rest, security, comfort, contentment, and deliverance. Readings were prescribed mostly from the poetic portions of the Old Testament, especially the Psalms, Proverbs, and Isaiah. (See Appendix B for the complete list.)

These readings were done on a voluntary basis from any Bibles the students could find. Many used their own copies, while a few used copies of various translations which were placed on library reserve. The voluntary basis more closely approximated the recommended bibliotherapeutic techniques seen in the review of the literature.

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A variable response in terms of the amount of time spent in reading and discussing these selections was assumed. This inexact replication, or heterogeneity, in the execution of the treatment allowed for more valid generalizing to other similar treatments. A weekly record of reading, reacting, and discussing was kept by the students for the duration of the eight-week study. At least five minutes of reading were suggested for five different days of the week - a minimum of twenty-five minutes per week.

For comparison group. The comparison group read and discussed articles of interest from available magazines and newspapers. A similar record of readings, reactions, and time was kept by these students. Group discussions were held with a similar type of leadership, attendance, and maintenance of anonymity.

Description of Reaction Cards

Personal data. Both the experimental and the comparison groups were given a 4"x6" reaction card specifically designed and printed for the present study. (See Appendix D.) On this card the student placed four bits of identifying information: (a) his professor's last name (This name was needed because some students were receiving course credit.); (b) his group designation (The letter L was used to designate the experimental group and the letter N was used to designate the comparison group. The subjects only knew that they were an L or an N. They were not given any interpretation in terms of "experimental" or "comparison" groups.); (c) a numeral for the week of his participation (The numerals matched the weeks, i.e. from week #1 to week #8. The student used one card each week. Attendance was based

upon the receipt of this card.); (d) his Social Security Number (Personal names were never used in an effort to insure as much anonymity as possible.) One of the clerical responsibilities of the co-moderators was to distribute and collect these cards on a weekly basis during the discussion session.

Weekly record of readings and reactions. This reaction card also provided space for four other items: (a) the date, including the month and day of month and day of week; (b) the source of the reading (The experimental group recorded one of the chapters recommended. This included the name of the Bible book, the chapter, and in some cases the particular verses. It also included some designation of the particular translation or version of the Bible being used. This was needed because of Catholic and Protestant Bible differences. The comparison group read short articles, or portions of articles, of interest to them in magazines and newspapers. This group wrote a brief bibliographical entry in the place designated for "Source."); (c) the amount of time in minutes spent in reading (Five minutes per day for five days a week were recommended for both groups.); (d) a reaction at the time of reading. This "reaction," or the gist of their reaction, served as a stimulus to their memory when they were asked to participate in a discussion session. These written reactions were also a stimulus to something more than a mere passive involvement. Since these cards were designed basically for the above personal functions, a collating of their contents was impracticable.

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CHAPTER IV

RESULTS AND DISCUSSION

Within a pretest-posttest comparison group design, two general sets of directional hypotheses were formulated dealing with comparisons between (a) the experimental group and the comparison group and (b) the high Bible group and the low Bible group. Each of these two basic hypotheses groups was divided into two areas. One area considered pretest-posttest comparisons, and the other area included posttest-only comparisons. The following discussion of the results is consistent with the sequential listing of the hypotheses in chapter one.

Delineation of Results

Between Groups: Experimental vs. Comparison (Pretest-Posttest)

A major expectation in this study was that manifest anxiety would be more significantly reduced in the experimental group than in the comparison group. A pretest-posttest set of three directional hypotheses stated that the mean reduction in the measured anxiety of the experimental group would be significantly greater than that of the comparison group for those subjects with three levels of prior familiarity with the treatment materials, i.e.: (a) high Bible knowledge, (b) average Bible knowledge, and (c) low Bible knowledge.

These directional hypotheses of greater reduction were rejected when the p was larger than the .10 point of confidence. Below the

.05 point, the hypotheses were accepted. The area between .05 and .10 was considered of doubtful significance.

High Bible knowledge hypotheses: For those students with a high degree of Bible knowledge (HB), the mean reduction difference in the measured anxiety of the experimental group would be significantly greater than the mean reduction difference in the measured anxiety of the comparison group.

TABLE 1

Pretest and Posttest Means, Standard Deviations, and Values of *t* for Experimental and Comparison High Bible Groups

Groups Compared	Pretest Mean	Posttest Mean	Mean Reduction	Difference S.D.	t	p
	Taylor Manifest Anxiety Scale - A Scale					
Experimental (N=37)	23.32	22.27	1.05	5.75	.02	.45
Comparison (N=29)	23.17	22.14	1.03	3.83		
	Eysenck Personality Inventory, Form A - N Scale					
Experimental (N=37)	14.73	12.97	1.76	3.89	.05	.45
Comparison (N=29)	14.72	13.00	1.72	3.17		

The anxiety (A) scale of the Taylor Manifest Anxiety Scale (TMAS) and the neuroticism (N) scale of the Eysenck Personality Inventory, Form A, (EPI-A) were the two pretest-posttest measures of this directional hypothesis with the experimental high Bible group as well as the comparison high Bible group. The low *t* ratios in Table 1 support the high probability of chance factors operating to produce the dif-

ference. The overall pretest-posttest direction was in favor of only slightly greater reduction in anxiety in the experimental group. The hypothesis was, therefore, rejected at the .45 point of confidence.

Average Bible knowledge hypothesis: For those students with an average degree of Bible knowledge (AB), the mean reduction difference in the measured anxiety of the experimental group would be significantly greater than the mean reduction difference in the measured anxiety of the comparison group.

The probabilities reported in Table 2 for the TMAS - A scale and the EPI (A) - N scale are almost counterbalancing.

TABLE 2

Pretest and Posttest Means, Standard Deviations, and Values of t for Experimental and Comparison Average Bible Groups

Groups Compared	Pretest Mean	Posttest Mean	Mean Reduction	Difference S.D.	t	p
	Taylor Manifest Anxiety Scale - A Scale					
Experimental (N=29)	24.52	23.55	.97	3.23	2.40	.01
Comparison (N=24)	23.50	25.04	-1.54	4.13		
	Eysenck Personality Inventory, Form A - N Scale					
Experimental (N=29)	14.59	13.76	.83	4.09	1.02	.15
Comparison (N=24)	14.88	12.88	2.00	4.08		

With the TMAS alone the directional hypothesis would be accepted, however, the low probability approaching significance on the EPI is in favor of the comparison group.

Low Bible knowledge hypothesis: For those students with a low degree of Bible knowledge (LB), the mean reduction difference in the measured anxiety of the experimental group would be significantly greater than the mean reduction difference in the measured anxiety of the comparison group.

TABLE 3

Pretest and Posttest Means, Standard Deviation, and Values of *t* for Experimental and Comparison Low Bible Groups

Groups Compared	Pretest Mean	Posttest Mean	Mean Reduction	Difference S.D.	t	p
	Taylor Manifest Anxiety Scale - A Scale					
Experimental (N=27)	25.15	23.93	1.22	5.62	.90	.20
Comparison (N=27)	23.48	23.81	-.33	6.83		
	Eysenck Personality Inventory, Form A - N Scale					
Experimental (N=27)	14.48	13.15	1.33	3.32	.23	.40
Comparison (N=27)	15.41	13.85	1.56	3.82		

The data in Table 3 indicate that the LB group on the TMAS may have increased their level of anxiety in the comparison group. The direction was in favor of greater reduction in the experimental group on the TMAS, although the reported probability was not beyond the acceptable point of confidence. The probability for the EPI was near the 50-50 point of chance with slightly greater reduction seen in the comparison group. This hypothesis was also rejected.

In summary, these three directional hypotheses were rejected

with the reported probabilities generally falling well beyond the .05 point of confidence established for the present investigation. On the TMAS there was consistently greater reduction in manifest anxiety in the three experimental subgroups with the greatest mean difference reduction in the average Bible group, the moderator group. On the EPI - A the difference reductions for both the HB and LB group are near the 50-50 point of chance. The AB group difference was approaching significance in favor of the comparison treatment.

Between Groups: Experiment vs. Comparison (Posttest-Only)

High Bible knowledge hypothesis: For those students in the two HB groups, the mean of the manifest anxiety measures in the experimental group would be significantly less than that of the comparison group.

TABLE 4

Posttest Means, Standard Deviations, and Values of t for Experimental and Comparison High Bible Groups

Groups Compared	Posttest Mean	S.D.	t	p
	Eysenck Personality Inventory, Form B - N Scale			
Experimental (N=37)	15.81	4.37	.73	.25
Comparison (N=29)	15.03	4.12		
	Self-Analysis Form - B Scale			
Experimental (N=37)	18.73	7.33	.27	.40
Comparison (N=29)	18.41	6.25		

Two tests were used in the posttest battery that were not used in the pretest battery. These tests were the Eysenck Personality Inventory, Form B (EPI-B) and the Self-Analysis Form (SAF). Although the probabilities reported in Table 4 were not significant, the means of the comparison group were consistently lower than those of the experimental group. Based upon these probabilities the directional hypothesis was rejected.

Average Bible knowledge hypothesis: For those students in the two AB groups, the mean of the manifest anxiety measures in the experimental group would be significantly less than that of the comparison group.

TABLE 5

Posttest Means, Standard Deviations, and Values of t for Experimental and Comparison Average Bible Groups

Groups Compared	Posttest Mean	S.D.	t	p
	Eysenck Personality Inventory, Form B - N Scale			
Experimental (N=29)	15.59	3.12	.87	.20
Comparison (N=24)	16.38	3.31		
	Self-Analysis Form - B Scale			
Experimental (N=29)	19.38	6.07	.59	.30
Comparison (N=24)	20.33	5.54		

The posttest means reported in Table 5 for the EPI (B) and the SAF both show a lower level of measured anxiety in the experimental

group than in the comparison group. These differences were not great enough to allow acceptance of the directional hypothesis.

Low Bible knowledge hypothesis: For those students in the two LB groups, the mean of the manifest anxiety measures in the experimental group would be less than that of the comparison group.

TABLE 6

Posttest Means, Standard Deviations, and Values of *t* for Experimental and Comparison Low Bible Groups

Groups Compared	Posttest Mean	S.D.	t	p
	Eysenck Personality Inventory, Form B - N Scale			
Experimental (N=27)	16.26	2.05	.11	.45
Comparison (N=27)	16.15	4.41		
	Self-Analysis Form - B Scale			
Experimental (N=27)	19.67	5.05	.75	.25
Comparison (N=27)	20.85	6.23		

The data reported in Table 6 supported the rejection of this hypothesis. The EPI probability was at the 50-50 point of confidence slightly favoring the comparison group. The SAF probability tended to support the experimental treatment.

Within Groups: High Bible vs. Low Bible (Pretest-Posttest)

It was expected that those students who possessed greater initial familiarity with the treatment materials would be more positively

affected than those students who were not as familiar. In a pretest-posttest study this positive effect would be visible in a greater reduction in manifest anxiety. In a posttest-only comparison those with greater familiarity would secure a lower mean score than those of less familiarity.

Experimental group hypothesis: For those students in the experimental group, the mean reduction difference in the measured anxiety of the HB group would be significantly greater than the mean reduction difference in the measured anxiety in the LB group.

TABLE 7

Pretest and Posttest Means, Standard Deviations, and Values of *t* for the Experimental High Bible and Low Bible Groups

Groups Compared	Pretest Mean	Posttest Mean	Mean Reduction	Difference S.D.	t	p
	Taylor Manifest Anxiety Scale - A Scale					
High Bible (N=37)	23.32	22.27	1.05	5.75	.13	.45
Low Bible (N=27)	25.15	23.93	1.22	5.62		
	Eysenck Personality Inventory, Form A - N Scale					
High Bible (N=37)	14.73	12.97	1.76	3.89	.47	.35
Low Bible (N=27)	14.48	13.15	1.33	3.32		

The data in Table 7 indicate the close similarities in the comparative amounts of reduction between the experimental HB and LB groups. This hypothesis was rejected at the reported points of confidence.

Comparison group hypothesis: For those students in the comparison group, the mean reduction difference in the measured anxiety of the HB group would be significantly greater than the mean reduction difference in the measured anxiety in the LB group.

TABLE 8

Pretest and Posttest Means, Standard Deviations, and Values of t for the Comparison High Bible and Low Bible Groups

Groups Compared	Pretest Mean	Posttest Mean	Mean Reduction	Difference S.D.	t	p
	Taylor Manifest Anxiety Scale - A Scale					
High Bible (N=29)	23.17	22.14	1.03	3.83	.90	.20
Low Bible (N=27)	23.48	23.81	-.33	6.83		
	Eysenck Personality Inventory, Form A - N Scale					
High Bible (N=29)	14.72	13.00	1.72	3.17	.17	.45
Low Bible (N=27)	15.41	13.85	1.56	3.82		

As seen in Table 8, the reductions tended to be greater in the HB group than in the LB group. The reduction was not significant, therefore, the hypothesis was rejected.

Within Groups: High Bible vs. Low Bible (Posttest-Only)

Experimental group hypothesis: For those students in the experimental group, the mean of the manifest anxiety measures for the HB group would be significantly less than that of the LB group.

The probability points reported in Table 9 support a rejection

of this hypothesis.

TABLE 9

Posttest Means, Standard Deviations, and Values of *t* for the Experimental High Bible and Low Bible Groups

Groups Compared	Posttest Mean	S.D.	t	p
	Eysenck Personality Inventory, Form B - N Scale			
High Bible (N=37)	15.81	4.37	.54	.30
Low Bible (N=27)	16.26	2.05		
	Self-Analysis Form - B Scale			
High Bible (N=37)	18.73	7.33	.60	.30
Low Bible (N=27)	19.67	5.05		

The means are not significantly different. The means are, however, consistently lower for the HB than for the LB group.

Comparison group hypothesis: For those students in the comparison group, the mean of the manifest anxiety measures for the HB group would be significantly less than that of the LB group.

The data in Table 10 indicate the consistently lower mean anxiety scores for the HB group than for the LB group. These differences begin to approach significance. Nevertheless, the directional hypothesis was rejected.

TABLE 10

Posttest Means, Standard Deviations, and Values of t for the Comparison High Bible and Low Bible Groups

Groups Compared	Posttest Mean	S.D.	t	p
	Eysenck Personality Inventory, Form B - N Scale			
High Bible (N=29)	15.03	4.12	.96	.20
Low Bible (N=27)	16.15	4.41		
	Self-Analysis Form - B Scale			
High Bible (N=29)	18.41	6.25	1.44	.10
Low Bible (N=27)	20.85	6.23		

In summary, several trends were observed. In three out of four pretest-posttest comparisons the HB group realized a greater reduction in anxiety than the LB groups. In all four posttest-only comparisons the HB group means were lower than the LB means. Within the experimental group the probabilities ranged from .30 to .45. Within the comparison group the range was greater, from .10 to .45, all of which favored the HB group. None of these, however, permitted acceptance of the directional hypotheses.

Discussion of Results

Between Groups Comparisons

The TMAS, the SAF, and the EPI - (A & B) were administered to

both the experimental and the comparison groups. Within each of these groups were three subgroups: the high Bible (HB), the average Bible (AB), and the low Bible (LB) groups. These groups were formed to check the influence of prior familiarity with the treatment materials.

Those who possessed high familiarity with the materials appeared to be almost equally affected by the comparison and experimental group treatment. This was also generally true for those with low Bible knowledge. The average Bible knowledge group, however, with only one exception, tended to realize a more positive reaction to this experimental treatment. The probabilities tended to be a little lower, on the average, for this middle group than for the two extreme groups.

Several factors might explain this effect: (a) They were specifically selected and given brief training to be the moderators of the therapeutic discussion sessions. (b) They were given the responsibility of taking notes and writing a summary of their group's reactions. (c) They did not react to their group but were allowed to react to the investigator. In general, the degree of involvement in the therapeutic process was greater for this middle group than for the two extreme groups.

An elimination of the five probabilities that are at or above the .40 point of confidence, or very near the 50-50 point, would leave seven. Five of these probabilities tend to suggest, though non-significantly, a greater reduction in anxiety in the experimental group than in the comparison group. One of these differences was significant at the .01 point of confidence. Using multiple observations, as in the present investigation, would probably produce at least one significant probability with no more basis than the laws

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of chance. It should be noted that this study lasted for only eight weeks with a very minimum of exposure to the treatment materials. The effects of a longer investigation would be an appropriate sequel to this study.

Within Groups Comparisons

Comparisons were made within the experimental and comparison groups between the HB and LB groups with the same four measures mentioned above. In this manner, the differential therapeutic effect of the treatment was examined. On seven out of eight possible comparisons the HB group tended to realize a slightly greater reaction to the bibliotherapeutic technique.

The probabilities were somewhat lower in the comparison group than in the experimental group. On one scale the mean anxiety level actually increased for the LB group. It may be possible that participation in a research project was more anxiety-producing for the LB group as opposed to the HB group.

It is also possible that the anxiety experienced by the HB group might be more related to, or covered by, the biblical selections. For the LB group, being tested on biblical information and participating in a study which used biblical materials might have affected their anxiety scores.

Summary

In the two distinct hypotheses groups, twenty statistical comparisons were made, twelve in the between-treatments area and eight

in the within-treatments area. Only one of these twenty comparisons was significant, and this was between treatments. Corroborating indications suggested that greater involvement in the treatment procedures may have contributed to this effect. In addition, high Bible groups as compared to low Bible groups tended to realize greater reductions in manifest anxiety regardless of experimental or comparison group treatments. The differences, although not statistically significant, between the high Bible and low Bible groups were more pronounced in the comparison group than in the experimental group.

CHAPTER V

CONCLUSIONS AND IMPLICATIONS

Conclusions

Relative to the Investigation

The specific aim of this investigation was to study the effect of reading and discussing preselected segments of the Bible upon manifest anxiety in a college population. The primary expectation was that this treatment would significantly reduce anxiety as measured by four objective anxiety scales. A pretest-posttest control group design was used with the *t* ratio calculated both between and within treatment groups. Previous commitment to the experimental treatment materials and adequate reading comprehension abilities were evaluated with standardized measures.

A selection of 290 college students from a larger group of 1021 were randomly assigned to either an experimental or a comparison group. Within these major treatment groups were three subgroups representing different levels of existing Bible knowledge. The middle group was briefly trained to function as moderators of small discussion-reaction groups composed of the high and low Bible students. These groups met for twenty-five minutes once a week for eight weeks.

The results of this investigation suggested that the experimental treatment produced a noticeable, but nonsignificant, reduction in anxiety when compared to the comparison group. The

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possession of high Bible knowledge tended to facilitate this reduction as compared to low Bible knowledge, especially, though not significant, within the comparison group.

Relative to the Specific Hypotheses

Ten specific hypotheses were examined. The following conclusions are valid within the limitations of the present investigation.

1. It appears that the degree of prior familiarity with the treatment materials was not a factor in the reduction of anxiety from pretesting to posttesting.
2. Higher familiarity with the treatment materials appeared to be associated with a lower level of anxiety on both the pretests and the posttests.
3. A higher degree of involvement with the treatment procedures may have been a factor in anxiety reduction.

Implications

Relative to Bibliotherapeutic Practice

Within the limitations of the present investigation there appears to be little support for recommending portions of the Bible to effect a reduction in self-reported, manifest anxiety. There were rather definite trends revealed, but the specific hypotheses failed to acquire statistical significance. If one desires to produce a bibliotherapeutic effect of reading upon manifest anxiety, there is some support for insuring the highest degree of involvement.

Suggestive of Further Research

The preceding conclusions and implications are dependent upon the dimensions of the present investigation. Further research might explore in the following directions.

1. The existential commitment of the subjects to the treatment materials could be controlled. The degree of belief in the material, especially if the Bible is used, would appear to be an essential factor. Degree of belief could be compared to level of familiarity.
2. Specific reading prescriptions could be matched with the personal needs apparent during the therapy. In this manner, specific bibliotherapy could be compared to non-specific bibliotherapy.
3. Subjects at other chronological ages could be included. These subjects might involve the pre-adolescent or the aged.
4. Behavioral manifestations other than anxiety could be explored. Modifications of other personality variables could be examined, such as self-concept, honesty, altruism, aggressiveness, and dependence.
5. Bibliotherapy could be compared with other conventional types of therapy suggested for the same symptoms, such as reciprocal inhibition, desensitization, psychoanalysis, and logotherapy.
6. Within the context of bibliotherapy used in the present investigation, Bible reading could be compared with reading biographical literature or devotional material.
7. Long-term studies could be compared to short-term studies.

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The present investigation lasted only eight weeks.

8. Degrees of involvement could be explored in greater depth. The amount of reading, writing, and talking would be considered.

9. A more diagnostic examination of differential reactions could be used. The relationships could be explored between positive, negative, or neutral reactions to prescribed readings and degree of anxiety reduction.

10. More objectified techniques of collecting data relative to bibliotherapeutic reactions could be developed. Instead of open-ended reactions, the subjects would make their responses on a prepared and standardized scale.

11. The degree of personal interactions allowed during the discussion sessions could be controlled and examined.

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APPENDIX

APPENDIX A

Research Schedule

Week	Mo. & Days	Activities
1	9/27-10/1	Initial screening: EPI, Form A (N=1021)
2	10/4 -10/8	Stage two: DRT & SBCT (N=340); Group assignment (N=281)
3	10/11-10/15	Distribution of reading assignments & reaction cards
4	10/18-10/22	Discussion - reaction session: Week #1; TMAS (N=202)
5	10/25-10/29	D-RS: Week #2
6	11/1 -11/5	D-RS: Week #3
7	11/8 -11/12	D-RS: Week #4
8	11/15-11/19	D-RS: Week #5
9	11/22-11/26	D-RS: Week #6
10	11/29-12/3	D-RS: Week #7
11	12/6 -12/10	D-RS: Week #8
12	12/13-12/17	Posttesting: TMAS, SAF, EPI - A & B (N=151)
13	1/3 - 1/7	Posttesting: Make-up tests (N=22) Total 173
14	1/10- 1/14	Feedback: Personal data returned to subjects (N=98)

APPENDIX B

Readings for Experimental Group*

Old Testament			New Testament		
Book	Chapter	Verse	Book	Chapter	Verse
Deuteronomy	33	1-29	St. Matthew	5	1-16
Josue (Joshua)	1	1-18		6	19-34
Job	19	1-29		9	1-34
Psalms	4	1-9(8)		11	25-30
	22(23)	1-6		17	14-20
	26(27)	1-14	St. Mark	4	10-20
	31(32)	1-11		4	35-40(41)
	33(34)	1-23(22)		9	13(14)-28(29)
	36(37)	1-24	St. Luke	7	36-50
	42(43)	1-5		10	38-42
	45(46)	1-12(11)		23	26-38
	54(55)	1-24(23)	St. John	14	1-31
	55(56)	1-14(13)		16	16-33
	61(62)	1-13(12)	Romans	5	1-11
	83(84)	1-13(12)		8	28-39
	90(91)	1-16		14	1-9
	106(107)	1-9		15	1-6
	117(118)	1-29	2 Corinthians	1	3-7
	120(121)	1-8		4	7-18
Proverbs	3	5-26		11	21-30
	4	1-27		12	1-10
	13	1-25	Ephesians	1	3-14
	15	1-33	Philippians	4	4-20(19)
	16	1-33	Colossians	3	1-17
	28	1-28	I Thessalonians	4	1-18
Isaias	12	1-6		5	1-24
(Isaiah)	26	1-21	2 Timothy	1	3-14
	32	1-20	Hebrews	4	11-16
	43	1-28		10	1-25
	50	1-11		13	1-9
	51	1-23	I Peter	3	8-22
	53	1-12		4	1-19
	54	1-17		5	1-11
	58	1-14	I John	4	1-21
Lamentations	3	1-33		5	1-21
Daniel	6	1-28	Apocalypse	7	9-17
Nahum	1	1-15	(Revelation)	14	1-13
				21	1-4

*Protestant Bible differences in parentheses.

APPENDIX C

Pretest - Posttest Populations

Totals	Groups
173	Combined experimental and comparison groups
93	Combined experimental group
64	Combined experimental participants
37	Experimental high Bible group
27	Experimental low Bible group
29	Experimental moderator-leader group
80	Combined comparison group
56	Combined comparison participants
29	Comparison high Bible group
27	Comparison low Bible group
24	Comparison moderator-leader group

APPENDIX D

REACTION CARD

Prof._____ Week No.____ Group____ S.S. No._____

Day	Source	Time	Reactions